REMARKS

In response to the Examiner's requirement, an abstract on a separate page is enclosed.

Claims 1 to 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. In response, claims 1, 4, 5, 12, 14, 24 and 26 have been amended by substituting the terminology "selected from" with the terminology "selected from the group consisting of". In addition, claim 21 has been amended to refer to claim 1, thus eliminating the multiple dependency. The above amendments address and obviate the Examiner's rejection under 35 U.S.C. 112, second paragraph.

Claims 1 to 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauske et al (U.S. Patent No. 4,512,982) in view of Yang (U.S. Patent No. 5,441,939). The Examiner states that a person having ordinary skill in the art at the time the instant invention was made would have been motivated to modify compounds disclosed by Hauske et al at the 4" position in accordance with the teaching of Yang because such a person would have expected the resulting compounds to possess antibacterial activity. Applicants respectfully traverse for the following reasons.

The compounds described by Hauske et al as possessing antibacterial activity include 9a-aza-9a homoerythromycin compounds having hydrogen or amino 4" substituents, provided these are always different, and further, compounds having an oxo group at the 4" position. The amino group may also be acylated (column 3, lines 4 to 15).

The compounds described by Yang et al as possessing antibacterial activity include 3"-desmethoxy erythromycin or azithromycin derivatives having as its 4" substituents, either a hydroxy and an alkyl, alkenyl or phenyl group, or a hydrogen and a specified amino derivative (column 2 lines 40 to 65).

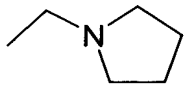
One of ordinary skill in the art would not be motivated to substitute the 4" substituents described by Yang et al for the 4" substituents described by Hauske et al and would not reasonably expect that such compounds would exhibit antibacterial activity since the compounds described by Yang et al have an entirely different ring structure from the compounds of the present invention. It would not be obvious, just because the 4" substituents when present in the ring structure described by Yang et al are described as antibacterially active, would when present in the significantly different ring structure of Hauske et al, provide for compounds that possess antibacterial activity.

The antibacterial compounds described by Yang et al have a CH_2 -$N(CH_3)$, $N(CH_3)$-CH_2, or O=C group present in the 8 position of its ring structure. The compounds of the present invention have only a hydrogen substituting the ring template (have an N-H group as part of its ring structure in the 9a position). In addition, a further significant difference is that the 3" substituent described by Yang et al is a monosubstituted methyl group, while the 3" position of the compounds of the present invention is di-substituted with a methoxy and methyl group. Yang et al do not mention or suggest those aspects of the described ring structure that results in antibacterial activity. Given the differences in ring structure from the present invention, it would not have been obvious that if one substituted the 4" substituents of

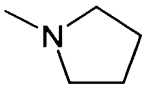
Yang et al for the 4" substituents of Hauske, the resulting compounds would possess antibacterial activity.

Hauske et al do no mention or suggest the 4" substituents of the presently claimed compounds as providing for antibacterial activity in the compounds of the present invention, but rather, describe H and amino substituents or an oxo substituent as the substituents of its 4" ring structure. It would not have been obvious to substitute the claimed 4" substituents that include hydroxy alkyl, alkynyl, alkenyl, etc., substituents (see claims 1 to 28) and which differ structurally from those of Hauske et al, and therefore could not have been reasonably expected to possess antibacterial activity based on the 4" substituents described by Hauske et al., with or without the description provided by Yang et al.

In addition, Yang et al do not mention or suggest the claimed 4" substituents of the present invention wherein one substituent is hydroxy and the other contains a methylene (CH_2) linker (see page 1, lines 26 to page 2, line 2). The compounds of the present invention having such a methylene linker provide unexpected antibacterial activity in view of the cited references. For example, a compound of the present invention, wherein the 4" substituent is of the structure



provides for much greater activity *in vivo* (mouse PD50 = 7mg/kg) compared to a compound encompassed by the Yang et al description, wherein the 4" substituent has the structure



and which provides for much less activity *in vivo* (mouse PD50 = greater than 80 mg/kg).

Thus, certain compounds having the 4" substituents described by Yang et al, when substituted into the ring structure of Hauske et al do not provide acceptable antibacterial activity. Such compounds are not claimed in the present invention. In view of this, one of ordinary skill in the art could not reasonably expect antibacterial activity in compounds produced by substituting the Yang et al substituents into the ring structure of Hauske.

Claim 28 is rejected under 35 U.S.C. 102(b) and anticipated, or in the alternative, under 35 U.S.C. 103(a) as obvious over the European Patent No. 0,508,699 A1. The Examiner states that compound xv on page 11 of the cited reference describes the compound of claim 28. The compound of claim 28 differs from the compound xv in having a nitrogen at the 9a position of the ring structure, while compound xv has a nitrogen at the 8a position. The claimed compound therefore is not anticipated by the cited reference. Further, EP 508,609 A1 does not mention or suggest the placement of the nitrogen as claimed in the ring

structure of the compounds of the present invention and therefore the rejection under 35 U.SC. 103(a) should be withdrawn.

In view of the above amendments and remarks, Applicants earnestly believe the present application contains patentable subject matter and respectfully request allowance of all of the claims.

Date: December 11, 2000

LORRAINE B. LING
Attorney for Applicant(s)
Reg. No. **35,251**

Pfizer Inc
Patent Department, 20th Fl.
235 East 42nd Street
New York, NY 10017-5755
(212) **573-2030**